

Deadlines and Important Dates

Hotel reservations	Immediately
Non-penalty final registration and payment	July 1, 1997
Submission of manuscripts	Oct. 6, 1997
Symposium	Oct. 6, 1997
Publication of papers in JGE	Summer 1998

Vail Valley Activities

There is much to see and do in the Vail Valley for participants and their families—including mountain hiking and biking, gondola rides, river rafting, tennis, golf, horseback riding, fine dining, and shopping. The program has been structured so that Wednesday is an “open day,” with organized field trips and recreational activities as well as opportunities for on-your-own activities.

Organizing Committee (USGS)

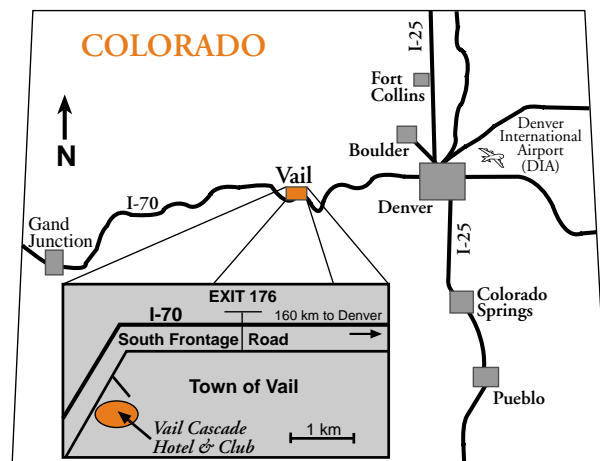
Ms. Cathy Ager	Mr. Richard Sanzalone
Dr. Larry Gough	Dr. Ronald Severson
Dr. Paul Lamothe	Dr. David Smith
Mr. Sherman Marsh	

Scientific Committee

Dr. Willard Chappell	Dr. Betsy Kagey
Dr. Brian Davies	Dr. Donald Runnells
Dr. Ron Fuge	Dr. Olle Selinus
Dr. Robert Garrett	Dr. Iain Thornton
Dr. Gwennyth Hall	Dr. Richard Wanty

Correspondence

Drs. L.P. Gough or R.C. Severson
U.S. Geological Survey, Federal Center
Box 25046, MS 973
Denver, CO 80225 USA
Phone: 303-236-5513 or 5514
Fax: 303-236-3200
E-mail: iseg@helios.cr.usgs.gov



◆ Final Circular ◆ Program Summary and Registration Materials



4th International Symposium on Environmental Geochemistry

**October 5–10, 1997
Vail, Colorado USA**

organized by
U.S. Geological Survey (USGS),
The Association of
Exploration Geochemists (AEG),
Society for Environmental
Geochemistry and Health (SEGH)

in collaboration with
International Association of
Geochemistry and
Cosmochemistry (IAGC)

Web Site Address:
<http://minerals.er.usgs.gov>

**PLEASE SHARE THIS NOTICE
WITH COLLEAGUES**

Venue

The *Vail Cascade Hotel & Club* is located in Vail, Colorado, 160 km west of Denver in the scenic Rocky Mountains. It is easily accessible by van transportation services or by rental car from the new Denver International Airport (DIA). Vail is world-renowned for its beauty, outdoor activities, and accommodations.

Accommodations

Hotel rooms and a limited number of suites and condominiums can be reserved through the *Vail Cascade Hotel & Club*. **Reserve lodging early as conference rate is only in effect for reservations made prior to August 22.** Hotel room charges range from \$65–\$95* per day (reserve early for the lowest rate). Families and groups should consider renting a suite or condominium as these are spacious, reasonably priced, and well appointed. For reservations call: 800-420-2424 (free inside USA) or 970-476-7111; e-mail: cascadehotel@vail.net; or fax: 970-479-7037. Be sure to mention the group code “4th ISEG Conference.”

Travel Arrangements Between DIA and Vail

Participants must make their own travel arrangements. The Conference has a special agreement with *Colorado Mountain Express (CME)* for van transportation service for the 160-km trip between DIA and Vail [*phone: 800-525-6363 (inside the USA) or 970-949-4227; or fax 970-949-5032*]. When contacting CME, please mention the special group code “4th ISEG Conference.” The conference round-trip shuttle rate is \$100. **You must make arrangements with CME at least 24 hours prior to your arrival at the airport.** Scheduled departure times from DIA to Vail follow: 08:30, 10:00, 11:45, 12:45, 14:00, 15:00, 16:30, 17:30, 19:00, and 21:30. Rental cars are readily available at DIA (leasing for about \$38–\$48/day) and should be reserved well in advance. There is **no** airline service to the Vail Valley in October.

Registration Fees

A registration fee of \$285 is due no later than July 1, 1997 (\$325 after July 1). This includes the program with abstracts, refreshment breaks, opening reception on Sunday, October 5, and banquet on Thursday, October 9. One-day passes will be available for attendance at the presentation sessions and refreshment breaks for \$150 per day. Students may register for \$100 with a valid student card (excludes banquet); spouses for \$100 (social functions only). Methods of payment: check payable to “4th ISEG” or charge (VISA or MasterCard). **All registration, workshop, and field trip fees must accompany registration form (enclosed). For refund policy, see registration form.**

*All quoted fees are in U.S. dollars.

Workshops, Excursions, and Field Trips

Workshops: October 5, Sunday (register by July 1—see enclosed registration form)

- **9:00 a.m.–5:00 p.m.** **\$75**
Acid-Forming Materials and Land Reclamation, taught by Scott Fisher (River Bend Assoc.) and Jon Brandt (Railroad Commission, Texas). Attendance limited to 25. The character of naturally occurring and rehabilitated acid dominated ecosystems and the concepts of reclamation, toxicity, and acid-forming materials (afm)/acid mine drainage (amd) will be discussed. Fundamental mineralogy of afm, oxidative processes, controlling mechanisms, and characteristics of the end products are examined. Analytical techniques for the identification and quantification of the amounts of afm/amd will be described. Interpretive frameworks will be illustrated. Agronomic and hydrologic reclamation problems related to afm/amd are discussed in the context of ecosystem rehabilitation. Mitigation options, costs, and planning procedures are presented.

- **1:00 p.m.–5:00 p.m.** **\$50**
Collecting geochemical data for both exploration and environmental purposes, taught by Richard K. Glanzman (CH2M Hill) and L. Graham Gloss (Colorado School of Mines). Attendance limited to 50.

Data collected and analyzed for exploration purposes can also be used for environmental purposes. An appreciation of both the objectives and the regulatory requirements associated with environmental compliance is required. Modification of standard exploration survey practices to meet environmental survey specifications will result in both improved exploration assessment and establishment of documented baseline conditions for future property development. Topics to be addressed include: orientation/background surveys, representative sampling, analytical requirements, risk considerations, and liabilities. Time will be available to answer questions about the commonalities and differences of each type of survey.

Possible Excursions: October 8, Wednesday (register by October 5—at time of Symposium)

- Central City casinos
- Day trip to Aspen, Colo.
- Golf tournament
- Local recreational activities
- Runner's tour of Vail Village

Field Trips: October 8, Wednesday, and October 10, Friday through October 12, Sunday (register by July 1—see enclosed registration form)

- Rocky Flats Environmental Technology Site (Wednesday, October 8).
- Rocky Mountain Arsenal environmental cleanup and tour (Wednesday, October 8).
- Clear Creek watershed (Wednesday, October 8).
- Leadville, Colorado (Wednesday, October 8).
- Eagle Mine, Eagle County (Wednesday, October 8).
- Climax Molybdenum Mine (Wednesday, October 8).
- Upper Animas River watershed (Friday, Saturday, and Sunday, October 10–12).

Program Sessions

The complete program can be viewed on the internet at <http://minerals.er.usgs.gov>

8:00 AM

Noon

5:30 PM

Evening

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Pre-Conference Workshops <ul style="list-style-type: none">Acid-forming materials and land reclamation	Opening Remarks Guest Speakers Sessions: <ol style="list-style-type: none">Mine Drainage Formation and GeochemistryGeochemistry of Fresh Water & Marine Environments	Session: <div>SEGH-Sponsored Session</div> <ol style="list-style-type: none">Environmental Geochemistry and HealthMethods of Environmental Geochemical Monitoring, Modeling, and Mapping and Use and Determination of Geochemical Baselines	Open Day Day trip to Aspen, Colorado Central City Casinos Golf Tournament Runner's Tour of Vail Village Local Recreational Activities Society Business Meetings International Interest Group Meetings Conference Field Trips: <ul style="list-style-type: none">Leadville, ColoradoClear Creek watershed	<ol style="list-style-type: none">Trace Substances, Ecosystems, and Bioavailability—aquatic/atmosphereMethods of Environmental Geochemical Monitoring, etc. <div>AEG-Sponsored Session</div> <ol style="list-style-type: none">Environmental Geochemistry of Ore DepositsTrace Substances, Ecosystems, and Bioavailability—terrestrial	<ol style="list-style-type: none">Trace Substances, Ecosystems, and Bioavailability—aquatic/atmosphereEnvironmental Analytical Techniques & ApplicationsRemediation of Mining-Related DisturbancesNatural and Man-Made Radiogenic Hazards
POSTER SESSION AND TRADE EXHIBITION CONCURRENT WITH SYMPOSIUM					
Registration <ul style="list-style-type: none">Collecting geochemical data for both exploration and environmental purposes	<ol style="list-style-type: none">Mine Drainage Formation and GeochemistryGeochemistry of Fresh Water & Marine Environments	<div>SEGH-Sponsored Session</div> <ol style="list-style-type: none">Environmental Geochemistry and HealthMethods of Environmental Geochemical Monitoring, etc.	<ul style="list-style-type: none">Rocky Flats Environmental Technology SiteRocky Mountain ArsenalEagle MineClimax Molybdenum Mine Poster sessions 2, 4, 6, 9 Setup	<div>AEG-Sponsored Session</div> <ol style="list-style-type: none">Environmental Geochemistry of Ore DepositsTrace Substances, Ecosystems, and Bioavailability—terrestrialMethods of Environmental Geochemical Monitoring, etc.	Upper Animas River field trip Conference Summation Poster and Exhibit Breakdown (by 4:00 p.m.)
Exhibit Setup Poster sessions 1, 3, 5, 7, 8, 10 Setup					
Opening Reception	<div>SEGH/AEG-Sponsored Social</div>			Banquet*	Depart

*Dr. Thomas J. Noel, Professor of History, University of Colorado, presents an entertaining travel-through-Colorado mining history.

Society and Special International Group Meetings (all in the Vail Cascade Hotel)

The SEGHE will conduct an Executive Board meeting on Sunday, October 5, from 9:00 a.m.–5:00 p.m. SEGHE will also hold a short business meeting on Tuesday, October 7, at 5:30 p.m. AEG will hold a general business meeting on Thursday, October 9, at 5:30 p.m. and a Council meeting at 8:00 a.m. Friday, October 10. The International Union of Geological Sciences (IUGS) Working Group on Global Geochemical Baselines and the Working Group on Geoscience and Health will be holding separate meetings on Wednesday, October 8. *For definitive times and dates please contact your society or working group officers.* Any changes in meeting location and times will be announced at the conference.

Exhibitor Space

The conference has space for 21 commercial exhibitors. Spaces are still available at \$650 (this includes a conference registration fee waiver for one person). We invite participation in presenting an exhibit of services, equipment, and technology. Exhibit space is immediately adjacent to the conference meeting rooms. The conference “refreshment breaks” encourage time for participant browsing. The deadline for exhibitor registration is **July 1**. Please contact **Paul Lamothe** at the correspondence address.

Guidelines for Oral Session Presentations

Twenty-minute time blocks are being allocated for oral presentations (15 min. for presentation and 5 min. for open discussion). Because of a very full 4-day program, there will be strict adherence to time limits. Speakers will have access to single or dual 35 mm projector systems as well as overhead projectors (transparencies). A rehearsal room will be available to preview your presentation. Presenters please see the “4th ISEG Program” for your assigned time period.

Guidelines for Poster Session Presentations

Posters will be presented in two groups by theme on either Sunday-Tuesday or Wednesday-Friday. Presenters please see the “4th ISEG Program” for your assigned time period. Posters will be displayed on one side of a single 8-foot high by 4-foot wide Velcro-covered board. Either Velcro or pins can be used for attachment. Posters should be set up any time on either Sunday or Wednesday and disassembled by 5:30 p.m. on Tuesday or by 4:00 p.m. on Friday. Authors are encouraged to be present at their posters during program breaks and during the formal poster session (5:00–6:30 p.m. Monday and Thursday).

Submission of a Journal Manuscript

Authors of both oral and poster presentations are encouraged to prepare a manuscript for publication consideration in a special issue of the Journal of Geochemical Exploration (JGE). Instructions for its preparation can be requested from the Organizing Committee (iseg@helios.cr.usgs.gov). All manuscripts are due the first day of the conference and will undergo peer review by the ISEG Scientific Committee and the JGE editors. Manuscripts will be either accepted for publication or released to the author to be considered for publication elsewhere.

Publishing of Abstracts

All abstracts (oral and poster) will be published as part of the program for the 4th ISEG. This document is included in the registration fee and will be available in the registration packet on the first day of the conference.

Registration

Reply by mail [4th ISEG, c/o USGS/CEGG, Federal Center, Box 25046, MS 973, Denver, CO 80225 USA]; Fax [303-236-3200].

Name: _____
(as you wish to see it on your name tag)

Address: _____
Prof. Dr. Mr. Mrs. Ms.

Country: _____

Phone: _____ Fax: _____ E-mail: _____

Complete Payment Information [All conference, workshop, and field trip fees must accompany registration. A full refund of conference and activity fees (less a \$50 administrative fee) will be made for requests postmarked prior to August 22, 1997. No refunds will be made after August 22.]

Conference:

U.S. Funds

\$285 (before July 1) \$ _____

\$325 (after July 1) \$ _____

Student Registration \$100 (does not include banquet)

\$ _____

Spouse Registration \$100 (social functions—banquet, reception, etc.)

\$ _____

Pre-Conference Workshops (Sunday, October 5):

Acid-Forming Materials and Land Reclamation (\$75) 9 a.m.–5 p.m. \$ _____

Collecting Geochemical Data for Both Exploration and

Environmental Purposes (\$50) 1 p.m.–5 p.m. \$ _____

Field Trips: (See accompanying sheet for trip descriptions.) [Please indicate 1st, 2nd, and 3rd choice—include payment for 1st choice only.]

1st choice 2nd choice 3rd choice
☐ ☐ ☐

Wednesday, October 8

- Rocky Flats Environmental Technology Site (separate "Official Visitor Information" form must accompany payment; personal photo identification card will be required at time of visit) (\$70)

\$ _____

☐ ☐ ☐

- Leadville, Colorado (\$55)

\$ _____

☐ ☐ ☐

- Eagle Mine (\$35)

\$ _____

☐ ☐ ☐

- Climax Molybdenum Mine (\$55)

\$ _____

☐ ☐ ☐

- Clear Creek watershed (\$70)

\$ _____

☐ ☐ ☐

- Rocky Mountain Arsenal (\$70)

\$ _____

Friday, October 10

- Upper Animas River watershed (Friday, Saturday, and Sunday) (\$310)

\$ _____

Less Deposit

\$ - ()

☐ Personal check for \$ _____ enclosed. **Total** \$ _____

Credit Card No. _____	Amount: \$ _____
<input type="checkbox"/> Visa <input type="checkbox"/> MasterCard	
Expiration date: _____	Signature: _____

NOTE: Hotel reservations and ground transportation are the responsibility of each registrant and are not covered on this form.

We are trying to gauge interest for possible excursions on Wednesday. Listed below are some possibilities that will be available if there is enough interest. Please indicate if you would like to participate in any of the following:

- ☐ Bus tour of Glenwood Canyon, lunch in Aspen, and possible side-trip to Maroon Bells Wilderness.
- ☐ Central City for limited-stakes gambling.
- ☐ Western-style chuckwagon dinner.

Introduction, Themes, and Presentation Titles

This will be the first Symposium in the series to be held in North America. The 3rd was in Krakow, Poland in 1994, and since that time topics of particular concern in the field of environmental geochemistry include air and water quality, abandoned mine land issues, and the relation of geochemistry to human and ecosystem health. The following titles for oral or poster presentation have been accepted by the Program Committee for the October 5-10, 1997 meeting (*authors—if you do not plan to attend please notify the Organizing Committee before July 1*):

PRELIMINARY 4th ISEG PROGRAM						
SENIOR AUTHOR			TITLE	COUNTRY	P/O*	Oral: Presentation No. Poster: Sun-Tu/Wed-Fri**
BANQUET SPEAKER						
Noel	Thomas	J.	A Leadville Narrative	USA		
SPECIAL SESSION—Guest Speakers						
Kabata-Pendias	Alina		(Trace Element Laboratory, Pulawy, Poland—invited) Soil parameters as a basis for the assessment of trace metal pollution	POLAND	O	
Leahy	Patrick	P.	(USGS Chief Geologist, Reston, VA—invited) The role of environmental geochemistry in U.S. Geological studies	USA	O	
Gundersen	Linda	C.	(USGS Mineral Resources Program, Reston, VA—invited) Environmental geochemistry—a vital component of the U.S. Geological Survey Mineral Resources Program.	USA	O	
Session 1. Mine Drainage Formation and Geochemistry						
<i>Session Chairs: Kathleen Smith and Jenny Webster (a.m.); Donald Runnells and Willard Chappell (p.m.)</i>						
Smith	Kathleen	S.	Geochemical characterization of a fluvial tailings deposit along the Arkansas River, Colorado, USA	USA	O	1-1
Balistrieri	Laurie	S.	A comparison of the geochemistry of water draining from adits and tailings piles in the Coeur d'Alene mining district—information for the geoenvironmental component of mineral deposit models	USA	O	1-2
Kelley	Karen	D.	Natural acid drainage associated with shale-hosted Ag-Pb-Zn massive sulfide deposits in the Brooks Range, northern Alaska, USA	USA	O	1-3
Overly	Bryan	M.	Variations in chemical and bacterial species of acid mine drainage affecting the Snow Fork drainage basin, Ohio—the Esco #40 under-ground mine	USA	O	1-4
Pearce	Nicholas	J.G.	Behaviour of heavy metals and REE in acid mine drainage—implications for the behaviour of transuranic metals	WALES UK	O	1-5
Evangelou	V.	P.	Influence of bicarbonate on pyrite oxidation	USA	O	1-6
Webster	Jenny	G.	Trace metal adsorption onto schwertmannite (iron oxyhydroxysulphate) in acid mine drainage systems	NEW ZEALAND	O	1-7
Stanton	Mark	R.	Mineral crusts or microbial mats? Alteration of surficial mine tailings in the Leadville District, Colorado	USA	O	1-8
Flohr	Marta	J.K.	Formation of gossan and oxidation of sulfide ores as analogs of oxidation of tailings piles	USA	O	1-9

* Presentation type (P=poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM						
SENIOR AUTHOR			T I T L E	COUNTRY	P/O*	Oral: Presentation No. Poster: Sun-Tu/Wed-Fri**
Wanty	Richard	B.	Mobilization and attenuation of metals downstream of a base-metal mining site in the Mátra Mountains, northeastern Hungary	USA	O	1-10
Lind	C.	J.	In-situ alteration of minerals by acidic ground water resulting from mining activities	USA	O	1-11
Church	Stanley		Geochemical and lead-isotopic studies of the environmental effect of mining at Summitville, Colorado	USA	O	1-12
Fricke	James		Biotreatment of metal mine waste waters—case histories	USA	O	1-13
Amacher	M.	C.	Reactions and transport of copper in headwater streams receiving acid rock drainage	USA	P	S-T-1
Bliss	Linda	N	Buffering of acid rock drainage by silicate minerals	USA	P	S-T-2
Gray	Floyd		Metal abundance and pH of intermittent and perennial streams during storm events, Patagonia Mountains, Arizona	USA	P	S-T-3
Hälbich	Torsten		Biogeochemistry of acid drainage from coal mining operations in the Witbank area	SOUTH AFRICA	P	S-T-4
Lanyon	Ruth		Dispersal of arsenic by gold mining near Barberton, South Africa	SOUTH AFRICA	P	S-T-5
Kempton	J.	H.	Moisture and salinity limits on pyrite oxidation in semi-arid climates	USA	P	S-T-6
Lee	Gregory	K.	Geoenvironmental assessment of Montana—potential for acidic, metal-rich drainage	USA	P	S-T-7
Parsons	Michael	B.	Hydrogeochemical controls on trace element release from the Penn Mine base metal slag dump, Calaveras County, California—linking field, laboratory, and geochemical modeling studies	USA	P	S-T-8
Pride	Douglas	E.	Identification and characterization of mine effluent in streams of the Colorado mineral belt—the Snake River, Montezuma mining district	USA	P	S-T-9
Rätsep	Aavo		The influence of mine-drainage formation on the geochemical and hydro-geological state of the environment in Estonia	ESTONIA	P	S-T-10
Ridley	William	I.	An integrated environmental geosciences project in the Santa Cruz River drainage basin, southern Arizona	USA	P	S-T-11
Session 2.			Geochemistry of Fresh Water & Marine Environments			
			<i>Session Chairs: Frank Manheim and Edeltrauda Helios-Rybicka (a.m.); Robert Lambeth and Martin Fey (p.m.)</i>			
McLemore	V.	T.	Geology and geochemistry of water and stream-sediment samples of the upper Pecos River Wilderness area, eastern New Mexico	USA	O	2-1
Reid	Caroline		Lead and zinc contamination of sediments in Zoar Vlei, Cape Peninsula, South Africa	SOUTH AFRICA	O	2-2
Birch	Gavin	F.	Towards a contaminant model for Port Jackson—Sydney's main estuary	AUSTRALIA	O	2-3
Klavins	Maris		Metal fluxes and accumulation in lakes of Latvia	LATVIA	O	2-4
Zober	Steffen		Hydrological explanation of the heavy metals concentration in the Wyszogrod Island, Vistula River, Plock, Poland	GERMANY	O	2-5

* Presentation type (P=poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			T I T L E	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Brown	Kevin	L.	Metals in an estuarine system—sources and sinks	NEW ZEALAND	O		2-6
Manheim	Frank	T.	Mapping chemical contaminants in estuarine and coastal marine sediments— new approaches to validating and using historical data	USA	O	2-7	
Lambeth	Robert	H.	Metal release and recolonization characteristics of tailings in a marine environment—a laboratory study and site demonstration	USA	O	2-8	
Knesl	Oliver		A geochemical investigation of the water and sediments of Barber's Pan, North West Province	SOUTH AFRICA	O	2-9	
Matthai	C.		The application of the equilibrium partitioning method in surficial sediments near a deepwater ocean outfall off Malabar, Sydney, Australia	AUSTRALIA	O	2-10	
Sullivan	Annett	B.	Temporal variation in the concentrations and speciation of metals in Peru Creek, Summit County, Colorado	USA	O	2-11	
Schettler	Georg		Lacustrine records of heavy metal pollution—problems of dating	GERMANY	O	2-12	
Taylor	S.	E.	Contaminant dynamics in Port Jackson Estuary, Sydney, Australis	AUSTRALIA	O	2-13	
Majer	Vladimir		Pollution of Czech freshwaters by trace elements	CZECH REPUBLIC	P		W-F-1
Helios Rybicka	E.		Impact of the Pb-Zn industry on the contamination of the Przemsza River, Upper Silesia, Poland	POLAND	P		W-F-2
Kim	Kyoung-Woong		Heavy metal contamination in dusts and stream sediments , Taejon area, Korea	KOREA	P		W-F-3
Rae	Joy	E.	Pesticide adsorption onto aquifer sediments	ENGLAND UK	P		W-F-4
Rosales-Hoz	L.		Distribution of trace and major elements in surface sediments from Coatzacoalcos River, Mexico	MEXICO	P		W-F-5
Savchenko	Vladimir		Low-water sediment in rivers of Belarus—origin, mineralogical and geochemical composition, potential for use in environmental assessments	BELARUS	P		W-F-6
Savchenko	Vladimir		Some approaches to the biogeochemical study of contaminated river ecosystems	BELARUS	P		W-F-7
Schettler	Georg		Lead isotope anomalies in Maar Lake sediments—indications of extensive lead mining in the Northwestern Eifel (Germany) during the time of the Roman Empire	GERMANY	P		W-F-8
Shakhverdov	V.		Heavy metals as indicators of anthropogenic pollution of bottom sediments in Neva Bay	RUSSIA	P		W-F-9
Zhamoida	Vladimir	A.	Modern shallow-water Fe-Mn concretions as an indicator of the contamination of marine environments—a new type of environmental geochemical monitoring	RUSSIA	P		W-F-10
Session 3. SEGH-Sponsored Session—Environmental Geochemistry and Health <i>Session Chairs: Betsy Kagey and Iain Thornton (a.m.);</i> <i>Brian Davies and Ron Fuge (p.m.)</i>							
Woodling	John	D.	Recovery of brown trout (<i>Salmo trutta</i>) and brook trout (<i>Salvelinus fontinalis</i>) populations in the Eagle River, Colorado, USA during and following CERCLA recovery actions	USA	O	3-1	
Farago	M.	E.	Exposure to platinum from vehicle catalytic converters and possible health implications	ENGLAND, UK	O	3-2	

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR		TITLE		COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Gauthier	E.		Relationship between Alzheimer's disease and aluminum speciation in drinking water—a case-control study in Saguenay-Lac-St-Jean, Quebec (IMAGE Project)	CANADA	O	3-3	
Schaefer	Joerg		Emissions of platinum-group elements (PGE) from automobile catalytic converters in soils along highways	GERMANY	O	3-4	
Thornton	Iain		Risk assessment related to metals—the role of the geochemist	ENGLAND, UK	O	3-5	
Belkin	Harvey	E.	Geochemistry of coals causing arsenism in Southwest China	USA	O	3-6	
McCaffrey	Lewis	P.	Distribution and origin of fluoride in rural drinking water supplies in the western Bushveld area of South Africa	SOUTH AFRICA	O	3-7	
Bashkin	Vladimir	N.	Biogeochemical heavy metal regionalization and human risk assessment	RUSSIA	O	3-8	
Gulson	Brian	L.	Mobilization of lead from maternal skeleton during pregnancy	AUSTRALIA	O	3-9	
Lin	Zhixun		Investigation of the environmental impact from the industry wastes deposited in an urban area of Falun, Sweden	SWEDEN	O	3-10	
Smith	Barry		Geochemical factors controlling infantile exposure to cerium and its implications to the aetiology of Endomyocardial Fibrosis in Uganda	ENGLAND UK	O	3-11	
Kavanagh	P.	J.	Arsenic exposure in southwest England, UK—significance for human health	ENGLAND UK	O	3-12	
Hoogewerff	Jurian		Use of archaeological bone in present-day baseline human exposure studies	NETHERLANDS	O	3-13	
Li	Xiangdong		Concentration and chemical partitioning of heavy metals in road dusts and urban soils in Hong Kong	HONG KONG	O	3-14	
Wang	Yong		Exposure of children to lead in the home environment—a comparative study in Shanghai and Birmingham	ENGLAND UK	O	3-15	
Zhang	Fuqing		Lead in the environment, China	CHINA	O	3-16	
Pooley	Justin		Soil chemical patterns possibly linked to Mseleni Joint Disease among rural inhabitants in northern Kwazulu-Natal, South Africa	SOUTH AFRICA	O	3-17	
Heinrichs	Gerold		Natural arsenic in Triassic sediments as source of drinking water contamination in Bavaria, Germany	GERMANY	O	3-18	
Li	Shan-Fang		The application of regional geochemical data in environmental studies	CHINA	O	3-19	
Malkhazova	S.	M.	Methods of monitoring environmental health	RUSSIA	P		S-T-12
Pearce	Nicholas	J.G.	Vehicle related emissions of heavy metals and platinum group elements in the urban environment—examples	WALES UK	P		S-T-13
Hutchinson	E.	J.	Changes in urban geochemistry in Nottingham and Birmingham between 1982 and 1997	ENGLAND UK	P		S-T-14
Bieniulis	Carol		Evaluation of baseline soils geochemistry in support of environmental health studies in the Rocky Mountain Region	USA	P	S-T-15	
Cameron	Eion	M.	Recent (1930's) natural acidification and fish kill in a lake that was an important food source to the population of Akulivik, northern Quebec	CANADA	P		S-T-15
Cunha	F.	G.	The application of geochemical data to environmental concerns in the MG State, Brazil	BRAZIL	P		S-T-16

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			TITLE	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Martin	Lori	M.	Allozyme variation upstream and downstream of metal contaminants in the brown trout (<i>Salmo trutta</i>) and caddis fly (<i>Arctopsyche grandis</i>) in Clear Creek, Colorado, USA	USA	P		S-T-17
Kovalevskii	Alexander	L.	The deficite of selenium—a global ecology-biogeochemical problem	RUSSIA	P		S-T-18
Fordyce	F.	M.	Geochemistry and human selenium imbalance in China	ENGLAND, UK	P		S-T-20
De Lima	Edmilson	S.	Trace-element contamination in the environment of Recife metropolitan area, Pernambuco, Brazil	BRAZIL	P		S-T-19
Hoogewerff	Jurian		Quantification of environmental exposure vectors by geochemical methods	NETHERLANDS	P		S-T-22
Tristán	E.		Application of exposure assessment models to Shipham, Somerset, UK—an area with soil contaminated by lead and cadmium	ENGLAND, UK	P		S-T-20
Session 4. Methods of Environmental Geochemical Monitoring, Modeling, and Mapping and Use and Determination of Geochemical Baselines <i>Session Chairs: Olle Selinus and Alina Kabata-Pendias (a.m.); Jorg Matschullat and Dave Smith (p.m.)</i>							
Talbot	D.	K.	A comparison of field and laboratory analytical methods of radon-potential mapping in areas with and without glacial drift coverage	ENGLAND, UK	O	4-1	
Chaffee	Maurice	A.	Discriminating between natural and anthropogenic anomalies in the surficial environment in Yellowstone National Park, Idaho, Montana, and Wyoming	USA	O	4-2	
Ander	E.	L.	Temporal variability in the geochemistry of waters from abandoned coal mines, County Durham, United Kingdom	ENGLAND, UK	O	4-3	
Mejeed	Salem	Yaseen	Anthropogenic and geogenic sources of trace metals in the environment—a case study of contaminated soils in the Pezinok-Pernek region of the Mali Karpaty Mountains, Slovakia	SLOVAKIA	O	4-4	
Selinus	Olle		Integrating GIS and multivariate statistics in environmental geochemistry	SWEDEN	O	4-5	
Zierdt	K.		Methods and evaluation models for standardized risk assessment of gold mining waste sites in South Africa	SOUTH AFRICA	O	4-6	
Van Tienhoven	Mieke		Baseline survey of air pollution impacts on soil and water quality in Mpumalanga Province, South Africa	SOUTH AFRICA	O	4-7	
Hudson-Edwards	Karen	A.	The use of Holocene floodplain sedimentary sequences for geochemical mapping	ENGLAND UK	O	4-8	
Russ	Jon		A new paleoclimate indicator based on AMS ¹⁴ C dates of biogenic whewellite	USA	O	4-9	
Posey	Harry		Establishing pre-disturbance water quality standards in areas of natural acid-metal contamination, upper Alamosa River, southern Colorado	USA	O	4-10	
Caron	Francois		A large-scale laboratory experiment to determine the mass transfer of CO ₂ from a sandy soil to moving ground water	CANADA	O	4-11	
Dodds	Heather	A.	Classifying and mapping the sensitivity of South African highveld soils to acidification	SOUTH AFRICA	O	4-12	
Matschullat	Jorg		Crustose lichens—capable of monitoring the atmospheric deposition of trace elements and organohalogens?	GERMANY	O	4-13	

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			T I T L E	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Zielinski	Robert	A.	Uranium and uranium isotopes as tracers of nutrient addition—a case study in south Florida	USA	O	4-14	
Reimann	C.		The "Kola Ecogeochemistry" Project	NORWAY	O	4-15	
Birke	Manfred		Geochemical mapping in the new Federal States of Germany	GERMANY	O	4-16	
McMartin	I.		Distribution of trace metals in soils near the base metal smelter at Flin Flon, Manitoba—natural and anthropogenic enrichments from a remote single point source area	CANADA	O	4-17	
de Bruin	D.		Environmental applications of the regional geochemical mapping of soils and stream sediments in South Africa	SOUTH AFRICA	O	4-18	
Seal, II	Robert	R,	Stable isotope characteristics of waters draining massive sulfide deposits in the eastern United States	USA	O	4-19	
Smith	Barry		High resolution baseline mapping of hydrochemical processes and their correlation with geochemical anomalies and anthropogenic activities—Wales and Welsh borders	ENGLAND UK	O	4-20	
Wawrzynski	Alecia	L.	The utilization of high spectral resolution imagery and field spectra for the detection and monitoring of mining sites	USA	O	4-21	
Magnuszewski	Artur		Ground truth versus a GIS model—the ground water quality of the Vistula River floodplain near the city of Plock, Poland	POLAND	O	4-22	
Hirner	A.	V.	Testing contaminant mobility in soils and waste materials	GERMANY	O	4-23	
Tarvainen	Timo		Delineating risk areas of contaminated ground water using geochemical databases	FINLAND	O	4-24	
Holmes	Charles		Ecological changes in Florida Bay—can we tell when it happened?	USA	O	4-25	
Birke	Manfred		Environmental geochemistry in the surroundings of the central waste deposit of Berlin	GERMANY	P		W-F-11
Matschullat	Jorg		What is background? A statistical approach, introduced with data for the Baltic Sea	GERMANY	P		W-F-12
Bashkin	Vladimir	N.	Risk assessment of ecosystem buffering to acid input in Russia	RUSSIA	P		W-F-13
McNeal	James	M.	The spatial reliability of geochemical maps	USA	P		W-F-14
Bonham-Carter	G.	F.	Mass-balance study of the Flin Flon smelter emissions—calculations on metals in humus in the Flin Flon-Snow Lake region, Manitoba and Saskatchewan	CANADA	P		W-F-15
De Vivo	Benedetto		Environmental geochemical mapping in Sardinia, Italy	ITALY	P		W-F-16
Fuge	Ron		Temporal and spatial variations in the chemistry of ochres derived from an abandoned metalliferous mine	WALES UK	P		W-F-17
Fumoto	Tamon		Sulfate adsorption model for predicting soil acidification	JAPAN	P		W-F-18
Havis	Robert	N.	Leaching of contaminants from an aggregate	USA	P		W-F-19
Jerz	Jeanette	K.	Laboratory leaching behavior of an Arkansas River fluvial tailings deposit, Leadville, Colorado	USA	P		W-F-20
Jordan	David	L.	Geochemical transport modeling of mine tailings pore water	USA	P		W-F-21
Kapinus	Evgeny	I.	Environmental monitoring of geochemical changes in ash-dumps and silage-heaps	UKRAINE	P		W-F-22
Komov	Igor	L.	Environmental geochemical mapping in the Ukraine	UKRAINE	P		W-F-23

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM						
SENIOR AUTHOR			TITLE	COUNTRY	P/O*	Oral: Presentation No. Poster: Sun-Tu/Wed-Fri**
Locke	W.	W.	Comparison of the measured and modeled geochemical composition of a Nevada pit lake	USA	P	W-F-24
Luukkonen	A.		Regression methods in bedrock groundwater composition estimation from hydrogeological parameters	FINLAND	P	W-F-25
Mukherjee	P.	K.	Heavy metal distribution and environmental status of Doon Valley soils, Uttar Pradesh, India	INDIA	P	W-F-26
Niskavaara	Heikki		The use of two leaches in environmental geochemical mapping to assess the concentration and mobilities of elements in soils	FINLAND	P	W-F-27
Reimann	C.		A geochemical atlas of the central parts of the Barents region	NORWAY	P	W-F-28
Roulier	Leanne	M.	A survey and analyses of the oxygen and carbon isotope composition of selected shells from core tops at five locations in Florida Bay	USA	P	W-F-29
Shakhverdov	V.		Principles of landscape geochemical map composition and landscape geochemical zonality of the Aral Sea rim	RUSSIA	P	W-F-30
Staines	Russell		Small scale spatial relationships between geology, stream water chemistry and stream sediment chemistry in small upland catchments	ENGLAND UK	P	W-F-31
Swennen	R.		Unravelling the degree and the history of environmental pollution based on the evaluation of vertical geochemical profiles in overbank sediments	BELGIUM	P	W-F-32
Talbot	D.	K.	Radiometric risk mapping using existing geoscience datasets	ENGLAND UK	P	W-F-33
Turner	David	R.	Perched water zones in arid environments—geochemical constraints on hydrological modeling for high-level radioactive waste disposal	USA	P	W-F-34
Wen	Dongguang		Possibility of geological disposal of CO ₂ —results from geochemical modeling	P.R. CHINA	P	W-F-35
Zierdt	K.		The South African Environmental Management System (SEMS)—Carletonville Gold Mining area as a pilot study	SOUTH AFRICA	P	W-F-36
Zierdt	K.		Interdisciplinary training modules in mining and the environment case study on the Zambian Copperbelt, central Africa	SOUTH AFRICA	P	W-F-37
Session 5. Trace Substances, Ecosystems, and Bioavailability—aquatic/atmosphere <i>Session Chairs: Laurie Balistrieri and David Levy (Thursday a.m.); John Gray and Gianni Cortecchi (Friday a.m.)</i>						
Gray	David	J.	Acid/saline ground waters in the southern Yilgarn Craton, western Australia	AUSTRALIA	O	5-1
Varsányi	Iren		Contamination of ground water in a varying hydrogeochemical environment, southeast Hungary	HUNGARY	O	5-2
Bourg	Alain	C.M.	Solubility of heavy metals in relation to the geological context—a theoretical approach	FRANCE	O	5-3
Edwards	Robert		The development of a biological toxicity based test for water quality	ENGLAND, UK	O	5-4
Rasmussen	Pat	E.	Emissions of mercury to the atmosphere—natural sources and pathways	CANADA	O	5-5
Cortecchi	Gianni		Isotopic and chemical compositions of rain and snow precipitation at Bologna, Italy	ITALY	O	5-6

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR		TITLE		COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Lee	Jin-Soo		Dispersion and enrichment of potentially toxic elements in areas underlain by black shales and slates in Korea	KOREA	O	5-7	
Levy	David	B.	Geochemistry of arsenic and fluorine in shallow ground water—eastern Owens Lake, California	USA	O	5-8	
Domagalski	Joseph	L.	Mercury occurrence, transport, and speciation in the Sacramento River Basin, California	USA	O	5-9	
Fannin	Craig		A study of the rare earth elements in aqueous carbonate and chloride systems	ENGLAND, UK	O	5-10	
Montoroi	J.	P.	Aluminum and iron mobility in an acid sulfate environment and consequences for the local population—the case of the Lower Casamance (Senegal)	FRANCE	O	5-11	
Gurrieri	J.	T.	Distribution of metals and effects on aquatic biota in the upper Stillwater River Basin, Montana	USA	O	5-12	
Bourg	Alain	C.M.	Migration of heavy metals away from landfills in leachate—observations at the near- and far-field scale	FRANCE	P		S-T-21
Bezuidenhout	Nico		Chemical and mineralogical changes associated with leachate production at a Kriel power station ash dam, Mpumalanga, South Africa	SOUTH AFRICA	P		S-T-22
Harck	Terry		Denitrification of nitrate-rich ground water entering Verlorenvlei Lake on the west coast of South Africa	SOUTH AFRICA	P		S-T-23
Gray	John	E.	Environmental geochemistry and mercury speciation of abandoned mercury mines in southwestern Alaska	USA	P		S-T-24
Hall	G.	E.M.	Preservation of arsenic species in natural waters	CANADA	P		S-T-25
Kedziorek	Monika	A.M.	Solubilization of heavy metals (Cd, Ni, Pb) during the percolation of the chelating agent EDTA through polluted soils and sediments	FRANCE	P		S-T-26
Magiera	Tadeusz		The connection of some heavy metals with the magnetic phase of fly ash from two Polish thermal power plants	POLAND	P		S-T-27
Tagutschi	Yuhsaku		Ground water flow system estimated by water quality	JAPAN	P		S-T-28
Yao	Huan		Environmental and hydrogeological problems caused by over exploitation of geothermal ground water in coastal cities of south-eastern China—a case study in Fuzhou Basin	CHINA	P		S-T-29
Session 6. AGE-Sponsored Session—Environmental Geochemistry of Ore Deposits <i>Session Chairs: Sherman Marsh and Eion Cameron (a.m.);</i> <i>Robert Garrett and Maurice Chaffee (p.m.)</i>							
Loukola-Ruskeeniemi	Kirsti		Natural analogue for bedrock pollution—environmental impact of Ni-Cu-Zn-rich black shales at Talvivaara, Finland	FINLAND	O	6-1	
Berner	Zsolt		Manifold heavy metal and As contamination by a German Zn-Pb deposit with a two thousand year-old mining history	GERMANY	O	6-2	
Rytuba	James	J.	Environmental geochemistry of mercury deposits in the Coast Range mercury belt, CA	USA	O	6-3	
Steele	Kenneth	F.	Comparison of ground water chemistry from the carbonate platform region of the Ozark Mountains, USA	USA	O	6-4	

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			TITLE	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Klassen	Rodney	A.	The effects of glacial dispersal and global processes on till geochemistry, Labrador, Canada	CANADA	O	6-5	
Ashley	Roger	P.	Environmental geochemistry of gold deposits in the Mother Lode Belt, California	USA	O	6-6	
Prieto	Gloria	R.	Geochemistry of heavy metals derived from gold sulfide minerals, Marmato District (Columbia)	COLUMBIA	O	6-7	
Fuge	Ron		The behavior of Cd and Hg during weathering of sphalerite—environmental implications	WALES UK	O	6-8	
Atkins	David	A.	Measurement and simulation of pyrite oxidation in the blasted rock of an open-pit mine	USA	O	6-9	
Klusman	Ronald	W.	Measurement of gas exchange processes between soils and the atmosphere and applications in environmental and exploration geochemistry	USA	O	6-10	
Gray	John	E.	Environmental studies of mineral deposits in Alaska	USA	O	6-11	
Eary	L.	E.	Effects of evapo-concentration on water quality in mine pit lakes	USA	O	6-12	
Glaesser	Walter		Environmental impacts of lignite open-cast mining areas in eastern Germany	GERMANY	O	6-13	
Brandvold	Lynn		A study of the analytical variation of sampling and analysis of stream-sediments from mining and milling contaminated areas	USA	P		W-F-38
Dalverny	Louis	E.	Application of mine fire diagnostics	USA	P		W-F-39
Leybourne	Matthew	I.	Variable geochemical responses to water-rock interactions at two undisturbed Zn-Pb massive sulphide deposits, Bathurst Mining Camp, N.B., Canada	CANADA	P		W-F-40
Van der Sluys	Jan		Geochemistry of overbank sediments in Belgium and Luxembourg—a way to assess environmental pollution	BELGIUM	P		W-F-41
Zhang	Licheng		Environmental geochemical features in coal mine areas of China	CHINA	P		W-F-42
Hirner	A.	V.	Organometaloid species in geochemical exploration—preliminary qualitative results	GERMANY	P		W-F-43
Klassen	Rodney	A.	A comparison of regional geochemical surveys of till and lake sediment, Labrador, Canada	CANADA	P		W-F-44
Kovalevskii	Alexander	L.	Biogeochemistry and exploration for mineral deposits in the USSR and Russia	RUSSIA	P		W-F-45
Kovalevskii	Alexander	L.	Ecological-biogeochemical status of the Baikal region	RUSSIA	P		W-F-46
Kovalevskii	Alexander	L.	Ore fields, deposits and zones of deep faults as probable geopathogenic biogeochemical provinces and belts	RUSSIA	P		W-F-47
Kovalevskii	Alexander	L.	Possibilities of mercury determination in the ash of plants and animals	RUSSIA	P		W-F-48
Kovalevskii	Alexander	L.	Regional and global mercury-biogeochemical provinces	RUSSIA	P		W-F-49
McCartan	Lucy		Lithogeochemical map of the Chesapeake Bay watershed—an example of usable repackaging of traditional geologic information	USA	P		W-F-50
Session 7.			Environmental Analytical Techniques & Applications				
			Session Chairs: Gwennyth Hall and Paul Lamothe				
Ingram	Jani	C.	Contaminant detection in soils using static SIMS	USA	O	7-1	

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			TITLE	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Taylor	Howard	E.	The use of sedimentation field flow fractionation-inductively coupled plasma mass spectrometry for the chemical characterization of suspended particulate matter in environmental hydrologic systems	USA	O	7-2	
Glanzman	Richard	K.	Multimedia environmental geochemical mapping using field portable X-ray fluorescence	USA	O	7-3	
Helios Rybicka	E.		Direct methods used for the identification of the heavy metal forms	POLAND	O	7-4	
Leinz	Reinhard	W.	NEOCHIM—an electrogeochemical method for environmental applications	USA	O	7-5	
Matschullat	Jorg		Solid phase AAS—a new old technique: first results with environmental material	GERMANY	O	7-6	
Krüger	Gero		Multistage reflectance spectroscopic analyses of central German lignite overburden dumps (first results)	GERMANY	P		S-T-30
Ping	Ren		Determination of lead in environmental matrices by hydride generation atomic fluorescence spectrometry (HGAFS)	CHINA	P		S-T-31
Viman	Vasile		Atomic emission spectrometry-inductively coupled plasma used in the analysis of pollutants from a non-ferrous extraction and processing facility	ROMANIA	P		S-T-32
Session 8.			Trace Substances, Ecosystems, and Bioavailability—terrestrial <i>Session Chairs: William Orem and Irina Stangeeva (a.m.); Harald Püchelt and Rama Kotra (p.m.)</i>				
Fuge	Ron		Platinum group elements in road-side dust	WALES UK	O	8-1	
Stangeeva	Irina		Some peculiarities of chemical element bioaccumulation in different environmental samples	RUSSIA	O	8-2	
Makino	T.		The investigation of the redox reaction and adsorption of chromium in soils	JAPAN	O	8-3	
Asami	Teruo		Pollution of sediments, soils, and plants by thallium	JAPAN	O	8-4	
Garrett	Robert	G.	Some methods for estimating phytoavailable cadmium in prairie soils	CANADA	O	8-5	
Räsänen	Marja	L.	The response of the interlayering of clay minerals to the mobility of Al in acidified podzols	FINLAND	O	8-6	
Mielke	Howard	W.	Soil Pb, Zn, and Cd in metropolitan New Orleans—their geochemical characterization and association	USA	O	8-7	
Dinelli	Enrico		Plant-soil relationships in the serpentinite screes of Mt. Prinzera, northern Apennines, Italy	ITALY	O	8-8	
Orem	William	H.	The biogeochemistry of sulfur in the freshwater Florida everglades—sources, cycling, and relation to mercury methylation	USA	O	8-9	
Harrison	Wendy	J.	Acid buffering capacity and metals mobility in acid-impacted agricultural soils, San Luis Valley, Colorado	USA	O	8-10	
Püchelt	Harald		Uptake of trace elements by plants from soils contaminated by mining activities in southwest Germany and north-central Mexico	GERMANY	O	8-11	
Hall	G.	E.M.	Compatibility of data derived from different selective extraction schemes	CANADA	O	8-12	
Govil	P.	K.	Effect of industrial effluents on trace element mobility in soil	INDIA	O	8-13	
Äyräs	Mätti		Distribution of sulphur and heavy metals in podzolized tills in northern Finland	FINLAND	P		S-T-33

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR			T I T L E	COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Bondar	Galina	S.	Assessment of suitability of some disturbed land for herb cultivation	UKRAINE	P		S-T-34
Carranza- Edwards	Arturo		Textural analysis and its importance as an indicator of energy levels in environmental geochemistry	MEXICO	P		S-T-35
Evans, Jr.	Andrew		Biodegradation of ¹⁴ C labeled organic acids and organo-metal complexes in soil	USA	P		S-T-36
Nicholson	Keith		Environmental geochemistry of boron	SCOTLAND UK	P		S-T-40
Nowicki	Tom		Afforestation-induced enhancement of soil-solution aluminum and manganese concentrations in South African highland catchments	SOUTH AFRICA	P		S-T-37
Gao	Xiaojiang		Environmental geochemistry of rare earth elements in a typical landscape, Jiangxi, southern China	CHINA	P		S-T-38
Gennadiyev	A.		Behavior of polycyclic aromatic hydrocarbons in soil ecosystems	RUSSIA	P		S-T-39
Gonzalez	Luz Miryan		Heavy metals in soils of the Sabana de Bogota, Columbia	COLUMBIA	P		S-T-40
Kadatsky	Valery	B.	Heavy metals in humus and soil organic layers with different human activities	BELARUS	P		S-T-41
Kasimov	N.	S.	The behavior of rocket-fuel components in soil and plants in the Kazakhstan and Altay region of Russia	RUSSIA	P		S-T-42
Kotra	Rama	K.	Geochemistry of mercury and trace elements in organic-rich sediments and vegetation from the everglades, south Florida	USA	P		S-T-43
Lechler	Paul	J.	Incidental amendment of mercury to agricultural fields by turbid irrigation waters and natural floods in Nevada and Oregon	USA	P		S-T-44
Rashed	M.	N.	Biogeochemistry of trace elements in plants and interactions with soil around Nasser Lake, Egypt	EGYPT	P		S-T-45
Rechcigl	Jack	E.	Environmental impact of phosphogypsum use in agriculture	USA	P		S-T-46
Semenov	Yury	M.	Differentiation of heavy metals as a reflection of landscape-use levels	RUSSIA	P		S-T-47
Sakurai	Yasuhiro		Laboratory measurements of the absorption and oxidation of sulfur dioxide by the soil surface	JAPAN	P		S-T-48
Savchenko	Vladimir		Trace element distribution in soils and factors affecting metal uptake by plants in the contaminated flood plain of the Svisloch River, Belarus	BELARUS	P		S-T-48
Sonke	Jeroen		A chemical and mineralogical reconstruction of emissions from Zn-smelters in the Kempen region (Belgium), based on peat cores	NETHERLANDS	P		S-T-54
Strzyszcz	Zygmunt		Iron deposition and magnetic susceptibility of forest soils, Katowice Province, Poland	POLAND	P		S-T-50
Wang	Lijun		Environmental geochemistry of rare earth elements in common soils of China	CHINA	P		S-T-51
Session 9. Remediation of Mining-Related Disturbances							
<i>Session Chairs: Harry Posey and Suresh Kumar</i>							
Rebedea	Irina		An investigation into the mechanism by which synthetic zeolite amendments reduce soil phytotoxicity	ENGLAND, UK	O	9-1	
Deissmann	Guido		Geochemical assessment of passive treatment methods for acid mine waters from a flooded uranium mine	GERMANY	O	9-2	
Vandiviere	M.	M.	Comparative testing between conventional and microencapsulation approaches in controlling pyrite oxidation	USA	O	9-3	

* Presentation type (P-poster; O=oral)

** Poster presentation times (S-T=Sunday-Tuesday; W-F=Wednesday-Friday)

PRELIMINARY 4th ISEG PROGRAM

SENIOR AUTHOR		TITLE		COUNTRY	P/O*	Oral: Presenta- tion No.	Poster: Sun-Tu/ Wed-Fri**
Cheong	Young-Wook		Metal removal efficiencies of substrates for treating acid mine drainage of the Dalsung Mine, Korea	KOREA	O	9-4	
Joshi	D.	C.	Characterization of gypsum mine wastelands and their rehabilitation	INDIA	P		W-F-51
Kumar	Suresh		Rehabilitation induced vegetation progression at gypsum mined land in western Rajasthan—analytical approaches and empirical evidence	INDIA	P		W-F-52
Lund	D.		Uses of chemical speciation for impact evaluation and remediation of mining waste	ENGLAND, UK	P		W-F-53
Ni	Dagang		Purification of toxic metal contaminated ground water using Chitosan in partially converted crab shells	USA	P		W-F-54
Thompson	Bruce		Adsorption of metal cations on manganese oxide-coated filter sand: a novel method for water treatment	SCOTLAND UK	P		W-F-55
Nord, Jr.	Gordon	L.	Three-dimensional nanocrystalline networks limit limestone drain remediation—a role for environmental mineralogy	USA	P		W-F-55
Session 10. Natural and Man-Made Radiogenic Hazards							
Session Chairs: Rich Wanty and John Glendinning							
Kagan	Leonid	M.	Chernobyl nuclides in soils and gamma-dose rate in the air of Belarus	BELARUS	O	10-1	
Glendinning	John		Weathering and colloid mobility as factors influencing the migration of radioactive elements at Steenkampskraal Mine in the Northern Cape Province, South Africa	SOUTH AFRICA	O	10-2	
Smith	Barry		The distribution of natural radioelements in ground waters and post Cretaceous sediments from the southern Mediterranean margin	ENGLAND UK	O	10-3	
Shvartsev	Stepan	L.	The experience and the results for the disposal of liquid radioactive waste (LRW) on the Siberian Chemical Industrial Plant	RUSSIA	O	10-4	
Mazeika	Jonas		Radiogeochemical mapping in the Ignalina Nuclear Power Plant region—bottom sediments and soils	LITHUANIA	P		S-T-52
Shumlyanskiy	Vladkslav	O.	The radioactive mineral encrustation on the casings in the oil producing wells in the Dnieper-Donets depression, Ukraine	UKRAINE	P		S-T-53
Golovko	Natalia	V.	Organic substances and the migratory processes of radionuclides	UKRAINE	P		S-T-54
Kadatskaya	Olga	V.	Chernobyl contamination as a new geographical factor in Belarus	BELARUS	P		S-T-55
Kadatsky	Valery	B.	Re-suspension of the radionuclides in the Belarus soils distant from the Chernobyl Nuclear Power Plant	BELARUS	P		S-T-56

* Presentation type (P-poster; O=oral)

** Poster presentation times (S–T=Sunday–Tuesday; W–F=Wednesday–Friday)

4th ISEG Program Matrix—senior authors consult table of titles for presentation time.

	Sunday	Monday 10/6		Tuesday 10/7		Wed.	Thursday 10/9		Friday 10/10	
Time:	////	////	////	Sess. 3	Sess. 4	////	Sess. 5	Sess. 4	Sess. 5	Sess. 7
	////	////	////	////	////	////	////	////	////	////
8:00 – 8:20	////	////	////	3–1	4–1	////	5–1	4–20	5–7	7–1
8:20 – 8:40	////	////	////	3–2	4–2	////	5–2	4–21	5–8	7–2
8:40 – 9:00	////	Opening Remarks General plenary session		3–3	4–3	////	5–3	4–22	5–9	7–3
9:00 – 9:20	////			3–4	4–4	////	5–4	4–23	5–10	7–4
9:20 – 9:40	////			3–5	4–5	////	5–5	4–24	5–11	7–5
9:40–10:00	////			3–6	4–6	////	5–6	4–25	5–12	7–6
10:00–10:20	////	////	////	////	////	////	////	////	////	////
	////	Sess. 1	Sess. 2	Sess. 3	Sess. 4	////	Sess. 6	Sess. 8	Sess. 9	Sess. 10
10:20–10:40	////	1–1	2–1	3–7	4–7	////	6–1	8–1	9–1	10–1
10:40–11:00	////	1–2	2–2	3–8	4–8	////	6–2	8–2	9–2	10–2
11:00–11:40	////	1–3	2–3	3–9	4–9	////	6–3	8–3	9–3	10–3
11:40–12:00	////	1–4	2–4	3–10	4–10	////	6–4	8–4	9–4	10–4
12:00 – 1:40	////	////	////	////	////	////	////	////	////	////
	////	Sess. 1	Sess. 2	Sess. 3	Sess. 4	////	Sess. 6	Sess. 8	////	////
1:40 – 2:00	////	1–5	2–5	3–11	4–11	////	6–5	8–5	Closing Remarks General session	
2:00 – 2:20	////	1–6	2–6	3–12	4–12	////	6–6	8–6		
2:20 – 2:40	////	1–7	2–7	3–13	4–13	////	6–7	8–7		
2:40 – 3:00	////	1–8	2–8	3–14	4–14	////	6–8	8–8		
3:00 – 3:20	////	1–9	2–9	3–15	4–15	////	6–9	8–9	////	////
3:20 – 3:40	////	////	////	////	////	////	////	////	////	////
3:40 – 4:00	////	1–10	2–10	3–16	4–16	////	6–10	8–10	////	////
4:00 – 4:20	////	1–11	2–11	3–17	4–17	////	6–11	8–11	////	////
4:20 – 4:40	////	1–12	2–12	3–18	4–18	////	6–12	8–12	////	////
4:40 – 5:00	////	1–13	2–13	3–19	4–19	////	6–13	8–13	////	////
	////	////	////	////	////	////	////	////	////	////
Poster sessions 1, 3, 5, 7, 8, 10						2, 4, 6, 9				